

### **REMARKS/ARGUMENTS**

Claims 1 and 3-44 are pending in this application, and claim 1 is currently amended. The amendment to claim 1 is supported in the specification at least at page 7, lines 15-23. For at least the reasons stated below, Applicant asserts that all claims are in condition for allowance.

#### **CLAIM REJECTIONS UNDER 35 U.S.C. § 112**

Claim 44 is rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. Specifically, the Examiner states that the limitation of claim 44 — “the frequency at which the sensing unit measures the electrical operating characteristics of the luminaire is increased when the control unit determines that the luminaire is operating at less than a predetermined efficiency” — is new matter not previously found in the original disclosure.

Applicant respectfully submits that at least page 7, line 21—page 8, line 2 of the specification discloses the limitation of claim 44 and that no new matter has been introduced into the prosecution of the present application. For at least this reason, Applicant submits that claim 44 satisfies the requirements of 35 U.S.C. § 112, first paragraph, and respectfully requests that the rejection be withdrawn.

#### **CLAIM REJECTIONS UNDER 35 U.S.C. § 103**

Claims 1 and 3-44 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over various references. Applicant respectfully opposes these rejections because (1) the references cited by the Examiner are not analogous prior art as required by MPEP 2141.01(a); (2) the references, each alone or in combination, fail to teach or suggest all of the claim limitations as required by MPEP § 2143; and (3) there is no suggestion or motivation to combine or modify the references as required by MPEP § 2143.

##### **(a) *REFERENCES MUST BE ANALOGOUS PRIOR ART***

MPEP § 2141.01(a) provides: “In order to rely on a reference as a basis for rejection of an applicant’s invention, the reference must either be in the field of applicant’s endeavor or, if not, then

be reasonably pertinent to the particular problem with which the inventor was concerned.” (*internal citations omitted*). The Federal Circuit has also noted:

Patent examination is necessarily conducted by hindsight, with complete knowledge of the applicant’s invention, and the courts have recognized the subjective aspects of determining whether an inventor would reasonably be motivated to go to the field in which the examiner found the reference, in order to solve the problem confronting the inventor. We have reminded ourselves and the PTO that it is necessary to consider “the reality of the circumstances”, -- in other words, common sense -- in deciding in which fields a person of ordinary skill would reasonably be expected to look for a solution to the problem facing the inventor.

*In re Oetiker*, 977 F.2d 1443, 1446, 24 U.S.P.Q.2d 1443, 1445-46 (Fed.Cir.1992) (*internal citations omitted*). In the present case, at least the *Norman* reference (U.S. 5,243,340) is nonanalogous art.

(i) The Voltage Regulator of *Norman* Places the Reference Outside the Field of Endeavor of the Present Invention

The present claimed invention recites a luminaire monitoring system that measures the electrical operating characteristics at both the input and output of each luminaire in the system. Accordingly, the sensing unit of the present claimed invention measures the current at each luminaire’s input, the current at each luminaire’s output, and the voltage drop across the input and output of each luminaire.

This arrangement, *inter alia*, allows for a determination of whether the desired levels of voltage and current are being provided at each luminaire. Moreover, the configuration of the present invention provides for a robust and versatile monitoring system that appropriately measures the operating characteristics of a variety of different types of luminaires, including incandescent lights as well luminaires without filaments, such as induction lighting, halogen lighting, fluorescent lighting, LED lighting, and neon lighting. This versatility of the present invention, which is provided by the claimed measurements of voltage and current, is particularly useful given that the appropriate type of luminaire for a lighting system varies depending on the specific needs of the situation; for instance, it may be appropriate to use incandescent lights for airport lighting, but one would not likely use incandescent lights in a parking garage or for street lighting. The present invention is compliant with any type of luminaire, including incandescent lighting, induction lighting, halogen lighting, fluorescent lighting, LED lighting, and neon lighting.

In stark contrast, the *Norman* reference is directed towards creating an appropriate response to inoperative lights and merely determines if a light's operational status is inoperative. Col. 3, lines 17-23; col. 6, lines 64-68. However, the lighting electronic unit 18 (a.k.a. "AE unit") cited by Examiner merely monitors the operative status of a light at the light's output and determines if the light is operative by measuring whether there is a voltage present at the light. *See* Fig. 4. Such a system might provide some utility for an incandescent lighting system, but it would not be effective for monitoring other types of lighting. Moreover, the arrangement of the AE unit 18 as taught by *Norman* would not be able to differentiate between a failure due to a faulty light and a failure due to a power malfunction.

Moreover, the AE unit 18 of *Norman* requires a voltage regulator, *see* Fig. 4; col. 6, lines 32-44, and, indeed, the Examiner asserts that *Norman* implements a voltage regulator 41, which measures the output of lights. However, the voltage regulator is also unable to differentiate the type of failure that has occurred and is incapable of determining whether a desired level of voltage and current are being provided at each light as in the present claimed invention. A voltage regulator, as such, is not a sensor but a transformer with adjustable transformation ratio.

Additionally, because the AE unit 18 of *Norman* requires a voltage regulator 41 and a rectifier 43, which are integral parts to the AE unit of the *Norman* system, *see* Fig. 4, *Norman* could not be retrofitted to an existing system. In contrast, the present claimed invention, because it does not require a voltage regulator and a rectifier, is easily retrofittable to existing systems; the sensing unit of the present invention retrofits by merely attaching directly to the input and output of each luminaire. Thus, whereas the present claimed invention is appropriately retrofittable to any type of luminaire system—including incandescent lighting, induction lighting, halogen lighting, fluorescent lighting, LED lighting, and neon lighting—*Norman* would not properly retrofit to many of these other types of lighting systems.

For at least these reasons, *Norman* is not in the field of applicant's endeavor—providing for, *inter alia*, a retrofittable luminaire monitoring system that can determine whether the desired levels of voltage and current are being provided at each luminaire—and the reference is not reasonably pertinent to these particular problems with which the inventor of the present invention was concerned. Using "common sense" in deciding in which fields a person of ordinary skill would reasonably be expected to look for a solution to the problems addressed by the present invention, it is

unreasonable to expect that one of ordinary skill in the art would turn to *Norman*, given the nonanalogous relationship between the *Norman* system and the present claimed invention.

(ii) The Microprocessor and Associated Interfaces of *Norman* Places the Reference Outside the Field of Endeavor of the Present Invention

The monitoring system of the present claimed invention includes a distinct sensing unit, control unit, and monitor or monitoring equipment. Maintaining a separate sensing unit, control unit, and monitor allows the sensing unit of the present invention to achieve a compact size. Accordingly, as claimed in the present invention and shown in Figure 1, the sensor at each luminaire is relatively compact and unburdensome and achieves the attendant benefits of these characteristics.

In contrast, the *Norman* reference describes that each AE unit—the element of *Norman* that the Examiner asserts teaches the sensing unit of the present claimed invention—includes a microprocessor and associated interfaces 37 and power semi-conductors 39 for regulating the power supply to the lights. Col. 6, lines 32-44, Fig. 4. Further, “the microprocessor of the lamp control unit 35 also looks after monitoring of the operation...” *Id.* Including such a microprocessor and interfaces in a sensing unit is burdensome and bulky, and it would not achieve the benefits of the present claimed invention. In addition, housing the microprocessor and its power regulation functionality inside the AE unit would not be analogous to the present invention, where the control unit and monitor are separate elements, located elsewhere. One of ordinary skill in the art would not seek out the system of *Norman*, where a microprocessor and its power regulation functionality are inside the AE unit, to create the system of the present claimed invention, where the sensing unit, control unit, and monitor are separate elements.

For these addition reasons, *Norman* is not in the field of applicant’s endeavor—providing for, *inter alia*, a monitoring system with compact and unburdensome sensors at each luminaire with separate sensing unit, control unit, and monitor—and the reference is not reasonably pertinent to this particular problem with which the inventor of the present invention was concerned. Using “common sense” in deciding in which fields a person of ordinary skill would reasonably be expected to look for a solution to the problems addressed by the present invention, it is unreasonable to expect that one of ordinary skill in the art would turn to *Norman*, given the nonanalogous relationship between the *Norman* system and the present claimed invention.

(iii) For At Least These Reasons the *Norman* Reference is Outside the Field of Endeavor of the Present Invention

For at least the foregoing reasons, the *Norman* reference (1) is outside the field of endeavor of the present claimed invention; and (2) is not reasonably pertinent to the particular problems with which the inventor was concerned. Therefore, in accordance with MPEP § 2141.01(a), the *Norman* reference may not properly be relied on as a basis for rejection of Applicant's invention. Because the *Norman* reference was relied on as a basis for rejection for each and every 35 U.S.C. § 103(a) rejection to claims 1 and 3-44, these rejections are improper, and Applicant respectfully requests that they be withdrawn.

(b) *PRIOR ART MUST TEACH OF SUGGEST ALL CLAIM LIMITATIONS*

Section 2143 of the MPEP provides in part, "To establish a *prima facie* case of obviousness ...the prior art reference ... must teach or suggest all the claim limitations." Because the art of record, alone or in combination, fails to teach or suggest all of the claim limitations, Applicant respectfully requests that the 35 U.S.C. § 103(a) rejections be withdrawn.

(i) Claims 1, 5, 9-14, 19-24, 28, 29, and 35-37

Claims 1, 5, 9-14, 19-24, 28, 29, and 35-37 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Norman et al. (U.S. 5,243,340) in view of Hardy et al. (UK, GB 2,176,640). Because the cited references, each alone or in combination, fail to teach or suggest all of the claim limitations as required by MPEP § 2143, Applicant respectfully opposes these rejections.

(A) *Preventative Monitoring*

The present invention provides for a system for monitoring light sources and monitoring the electrical characteristics of those light sources. As described above, the specific electrical operating characteristics measured by the system of the present invention not only allow a determination of the specific type of failure that has occurred, but it also allows for a forecast that some type of future failure is imminent or at least likely. When such a forecast is made, the system allows for preemptive action to address the anticipated failure. For instance, if a luminaire failure is deemed imminent, the system may shut down an individual luminaire or a group of luminaires to avoid a non-passive end-of-life failure for the luminaires of concern. Alternatively, if it is deemed that a

luminaire failure is likely but not imminent, the system may increase the frequency at which measurements are made in an effort to more closely monitor the luminaires of concern.

Claim 1 has been amended to recite, "wherein the control unit changes a frequency at which the sensing unit measures the electrical operating characteristics of the luminaire if a problem is detected with the luminaire." Because neither *Norman* or *Hardy*, nor the combination thereof, even mentions the frequency at which electrical characteristic measurements are made, let alone changing such a frequency, the references fail to teach or suggest all of the claim limitations of claim 1. Moreover, nowhere do the cited references teach or suggest that the loop computer 16 of *Norman*—the element that the Examiner asserts teaches the control unit of the present invention—controls the sensing unit at all. Rather, the loop computer 16 of *Norman* merely receives information from the AE unit 18. Col. 5, lines 62-66; Col. 6, lines 1-6.

(B) *Measurement of Operating Characteristics*

Furthermore, as previously described, the sensing unit of the present claimed invention measures the current at each luminaire's input, the current at each luminaire's output, and the voltage drop across the input and output of each luminaire. Because this arrangement allows for a determination of whether the desired levels of voltage and current are being provided to and from each luminaire, the present invention is able to ascertain multiple electrical and operative characteristics of each luminaire. As described in the specification:

Each sensing unit ... is capable of measuring both current and voltage at both input ... and output.... This allows sensing units ... to determine whether each of luminaires ... are operating properly and if not operating properly, to accurately determine what the particular problem is. For example, if no current is received at output ... at a time when it should be, and proper power levels are detected at input ..., then the appropriate sensor ... determines that power is not flowing through the particular luminaire .... The most common cause for such a problem would be a broken filament or an otherwise inoperative bulb. A more extreme cause would be actual physical damage to the luminaire itself, such as a cut or severed wire. If the appropriate levels of current or voltage are not detected at input ..., then sensing unit ... determines that the problem lies with the power source .... Finally, if voltage or current levels are detected at output ... that are lower than they should be, then sensing unit ... determines that there is a problem with luminaire ... that may require maintenance in the future. For example, as the efficiency of any given luminaire ... decreases it may be indicative of an imminent failure. It is possible for sensing unit ... to determine the operative illumination of

luminaires ... to determine whether the problem needs immediate attention or can be delayed for some time.

(Specification, p. 6, line 22—p. 7, line 14) (emphasis added).

The arrangement of the present claimed invention, namely measuring current and voltage at both the input and output of each luminaire, allows for all of the above-described functionality, *e.g.*, determining whether “power is not flowing through the particular luminaire,” “appropriate levels of current or voltage are not detected at input,” “voltage or current levels are detected at output ... that are lower than they should be,” decreased efficiency is “indicative of an imminent failure,” and “the problem needs immediate attention or can be delayed for some time.” Neither *Norman* nor *Hardy*, nor the combination thereof, teaches or suggests the claimed features of the present invention that provide for this functionality.

In contrast, the *Norman* reference is directed towards creating an appropriate response to inoperative lights and merely determines if a light’s operational status is inoperative. Col. 3, lines 17-23; col. 6, lines 64-68. As described above, the AE unit of *Norman* merely monitors the operative status of a light at the output of the light. Similarly, the voltage regulator of *Norman* is unable to differentiate the type of failure that has occurred and is incapable of determining whether a desired level of voltage and current are being provided at each light as in the present claimed invention.

Examiner asserts that “it is generally understood in the art that *monitoring the status of a lighting inherently* includes *measuring the electrical operating characteristics* of the luminaire, as unambiguously recited in Col.6/ll.64-68.” (emphasis in original) However, the citation therein merely states, “By each lighting having its individual regulator, at least certain lightings can advantageously be fitted with battery backup, so that for voltage failure the lamp in the lighting continues to light with predetermined intensity.” This citation refers to a “regulator” and “voltage failure,” but nowhere does this citation unambiguously discuss “operating characteristics” as cited by Examiner. More importantly, nowhere does this citation, nor any other part of the *Norman* reference, teach or suggest measuring current and voltage at both the input and output of each luminaire, as claimed in the present invention.

The Examiner further cites the *Hardy* reference, but *Hardy* similarly fails to describe the claimed features at issue. *Hardy* provides for an apparatus for determining the operational status of equipment, where “at least one of the sensors may sense the presence or absence of an electrical power supply to the equipment and/or another sensor may sense voltage or current at a selected

position with the equipment..." Abstract; page 1, lines 50-62. *Hardy* goes on to describe five sensors, 11-15: sensors 11 and 12 are electrical power sensors, sensor 13 senses operational condition of a time switch or light sensitive means, sensor 14 is a voltage sensor, and sensor 15 is a light sensitive sensor. Page 3, lines 15-124. However, a careful reading of *Hardy* demonstrates that these sensors fail to teach or suggest measuring current and voltage at both the input and output of each luminaire, as claimed in the present invention.

Sensors 11 and 12, the electrical power sensors, are positioned downstream from fuses in the lamp post. Page 3, lines 15-55. However, these sensors do not measure current and voltage at both the input and output of each luminaire. Rather, sensor 11 merely "senses the operational condition of the mains board fuse," and sensor 12 "senses the condition of the area board fuse." Page 3, lines 15-28, 36-55. Nowhere does the reference discuss sensor 11 or 12 measuring the conditions of the light or luminaire, as claimed in the present invention. Sensor 13, which senses operation condition of a time switch or light sensitive means, also fails to described measuring current and voltage at both the input and output of each luminaire. The time switch and light sensitive means are tools that assist in controlling a light; measurement of these tools does not reveal current and voltage across a light.

Sensor 14, the voltage sensor, senses "insufficient voltage developed by the starter circuit to start the lamp." Page 3, lines 91-103. Further, this sensor is positioned downstream of the lamp control gear, but nowhere does *Hardy* teach or suggest that sensor 14 senses the voltage across a light; indeed, it would be odd if it did, given that sensor 14 senses insufficient voltage from the starter circuit, not the light. Finally, sensor 15, the light sensitive sensor, is positioned adjacent to the lamp bulb and merely detects whether the lamp is illuminated or not. Page 3, lines 109-124. This detection, however, senses illumination and would not reveal voltage or current and would not be able to differentiate between a failure due to a faulty light or for lack of power, as in the present claimed invention.

The Examiner points out that *Hardy* recites sensing voltage or current at page 1, lines 34-57. However, no further reference is made by *Hardy* to measuring current, and the only specific discussion in *Hardy* regarding voltage is directed towards the voltage developed by the starter circuit, which is measured by sensor 14. Thus, if *Hardy* measures a current, it is apparently the current through the starter circuit, not the light. Similarly, sensors 11 and 12, sense the condition of the mains board fuse and the area board fuse respectively, not the actual lights. Accordingly, *Hardy* does not described measuring current at both the input and output of each light, and nowhere does the



reference teach or suggest doing so. Upon careful consideration of the reference, it is clear that *Hardy* does not teach or suggest the claimed limitations of the present invention.

For at least the foregoing reasons, *Norman* and *Hardy*, each alone or in combination, fail to teach or suggest all of the claim limitations of claims 1, 5, 9-14, 19-24, 28, 29, and 35-37 and the dependent claims that depend there from, and Applicant respectfully requests that the 35 U.S.C. § 103(a) rejections be withdrawn.

(C) *Associated System*

Additionally, claims 5, 19, and 20 claim controlling an “associated system” or “related system.” *Norman* and *Hardy* fail to teach or suggest this limitation. The Examiner asserts that the “control unit 4 or 14 shown in Fig.3, controls an associated system, i.e., lamp control unit 35 equipped with microprocessors and associated interfaces 37 shown in Fig.4...” However, in the previous Amendment, Applicant noted that in one embodiment, the “associated system” is an ATM, as described in the specification. *See, also*, Specification, page 8, lines 3-13. In another embodiment, the “associated system” is a “traffic light.” *Id.* One of ordinary skill in the art, when reading claims 5, 19, and 20 in light of the specification, would know that the microprocessor and associated interfaces—that are inside the AE unit which “monitors the status of the lighting fitting”—is not at all the sort of “related system” claimed by the present invention, such as an ATM or a traffic light. Col. 6, lines 1-6, lines 32-44; Fig. 4. Whereas the present invention clearly claims the “sensing unit” and “associated system” as distinct elements, the microprocessor of *Norman* is clearly a component inside the AE unit. Nowhere do *Norman* or *Hardy* teach or suggest an associated system.

The Examiner further states that the limitation in claim 5, “when...a backup means is not available,” is “trivial for being conventional, since one of ordinary skill in the art would not be motivated to control an associated system when the operation of the luminaire system can be more easily reinstated by activating a backup system.” Applicant respectfully disagrees that this limitation is “trivial” or that it is taught by *Norman* or *Hardy*. First, neither *Norman* nor *Hardy* describes a “backup system.” Second, although *Norman* mentions using a “battery backup,” the battery backup clearly does not teach or suggest claim 5 because claim 5 recites that “a backup means is not available.” (emphasis added) Third, one of ordinary skill in the art, when reading claim 5 in light of the specification, would know that controlling an associated system when a luminaire is not operative and a backup means is not available is not trivial. Specifically, the specification describes how this

scenario can be useful: in an embodiment where a luminaire is intended to light an ATM but insufficient illumination is provided, the control unit causes the ATM (*i.e.*, the "associated system") to become inoperative to prevent its use in unsafe conditions. It is clear that this scenario is envisioned when operation of the luminaire system can not "be more easily reinstated by activating a backup system." This aspect of the present invention clearly addresses the scenario when such a "backup means is not available," as claimed in the present invention.

The Examiner subsequently states as to claims 5, 19, and 20 that "Applicant's claim language does not exclude a battery back up system, an entire second system, and an ATM, as an 'associated system' or 'related system' recited in Applicant's claims." As at least to claim 5, in light of the previous discussion, Applicant respectfully disagrees that "a backup means is not available" does not exclude a battery backup system. As to "an entire second system" and "an ATM," Applicant respectfully asserts that Examiner has not pointed out where *Norman* or *Hardy* teaches or suggests controlling "an entire second system" or "an ATM" when "the control unit determines that the luminaire is inoperative and a backup means is not available," as recited in claim 5.

For these additional reasons, Applicant respectfully requests that the 35 U.S.C. § 103(a) rejections as to claims 5, 19, and 20 be withdrawn.

(ii) Claims 3, 6, 7, 15-17, 25-27, 31-34, and 39-43

Claims 3, 6, 7, 15-17, 25-27, 31-34, and 39-43 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Norman* in view of *Hardy* and further in view of Grebe et al. (U.S. 5,973,616). Because the cited references, each alone or in combination, fail to teach or suggest all of the claim limitations as required by MPEP § 2143, Applicant respectfully opposes these rejections.

As shown above, the combination of *Norman* and *Hardy* fails to teach or suggest all of the claim limitations of independent claims 1, 9, 21, and 35. Accordingly, since claims 3, 6, 7, 15-17, 25-27, 31-34, and 39-43 incorporate all of the limitations of the independent claims from which they depend, the combination of *Norman* and *Hardy* also fails to teach or suggest all of the claim limitations of dependent claims 3, 6, 7, 15-17, 25-27, 31-34, and 39-43 that are incorporated from their respective independent claims. Thus, the combination of *Norman*, *Hardy*, and *Grebe* fails to teach or suggest all of the limitations of claims 3, 6, 7, 15-17, 25-27, 31-34, and 39-43.

(iii) Claim 4

Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Norman* in view of *Hardy* and further in view of *Chen* (U.S. 6,060,994) or *Petite* (U.S. 6,218,953). Because the cited references, each alone or in combination, fail to teach or suggest all of the claim limitations as required by MPEP § 2143, Applicant respectfully opposes these rejections.

As shown above, the combination of *Norman* and *Hardy* fails to teach or suggest all of the claim limitations of independent claim 1. Accordingly, since claim 4 incorporates all of the limitations of claim 1, the combination of *Norman* and *Hardy* also fails to teach or suggest all of the claim limitations of dependent claim 4 that are incorporated from claim 1. Thus, the combination of *Norman*, *Hardy*, *Chen* and *Petite* fails to teach or suggest all of the limitations of claim 4.

(iv) Claims 8, 30, and 38

Claims 8, 30, and 38 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Norman* in view of *Hardy* and further in view of *Hamm et al.* (U.S. 5,774,052). Because the cited references, each alone or in combination, fail to teach or suggest all of the claim limitations as required by MPEP § 2143, Applicant respectfully opposes these rejections.

As shown above, the combination of *Norman* and *Hardy* fails to teach or suggest all of the claim limitations of independent claims 1, 21, and 35. Accordingly, since claims 8, 30, and 38 incorporate all of the limitations of the independent claims from which they depend, the combination of *Norman* and *Hardy* also fails to teach or suggest all of the claim limitations of dependent claims 8, 30, and 38 that are incorporated from their respective independent claims. Thus, the combination of *Norman*, *Hardy*, and *Hamm* fails to teach or suggest all of the limitations of claims 8, 30, and 38.

(v) Claim 18

Claim 18 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Norman* in view of *Hardy* and further in view of *Pavarotti et al.* (U.S. 5,644,304). Because the cited references, each alone or in combination, fail to teach or suggest all of the claim limitations as required by MPEP § 2143, Applicant respectfully opposes these rejections.

As shown above, the combination of *Norman* and *Hardy* fails to teach or suggest all of the claim limitations of independent claim 9. Accordingly, since claim 18 incorporates all of the limitations of claim 9, the combination of *Norman* and *Hardy* also fails to teach or suggest all of the

claim limitations of dependent claim 18 that are incorporated from claim 9. Thus, the combination of *Norman, Hardy, and Pavarotti* fails to teach or suggest all of the limitations of claim 18.

(vi) Claim 44

The Examiner asserts that claim 44 “only represents an automation of a routine that is normally done by an operator in manual and conventional manner...[and] that broadly providing a mechanical or automatic means...to replace manual activity which has accomplished the same result, involves only routine skill in to art.” Applicant respectfully asserts that this is not a proper basis of rejection because (1) Examiner relies on *In re Venner*, 262 F.2d 91, 95, 120 U.S.P.Q. 192 (CCPA 1958), but this case is not sufficiently similar to the present claimed invention to serve as a rationale for rejection per MPEP § 2144.04, and (2) Applicant has demonstrated the criticality of the limitation in claim 44 such that it is not appropriate to rely solely on case law as the rationale to support an obviousness rejection.

MPEP § 2144.04 allows an examiner to use the rationale in a legal decision as the rationale for an obviousness rejection, but only “if the facts in [the] prior legal decision are sufficiently similar to those in an application under examination...” In the present case, Examiner cites *Venner*, and Applicant respectfully asserts that the facts in *Venner* are not “sufficiently similar” to those in the present application to allow for the case to serve as the sole legal basis for an obviousness rejection. Specifically, in *Venner*, the Appellant argued that the claims were allowable over the prior art because the claimed invention recited an old permanent-mold structure together with a timer and solenoid which automatically actuated the known pressure valve system after a predetermined time elapsed. *See*, 194. However, the Court upheld the rejection to the claims because the newly automated steps were previously known, they just had not been automated. *See*, 195. In the present case, however, the Examiner has not demonstrated that increasing “the frequency at which the sensing unit measures the electrical operating characteristics of the luminaire...when the control unit determines that the luminaire is operating at less than a predetermined efficiency” is known in the art in an un-automated fashion. In other words, it has not been shown by Examiner that the only novel aspect of claim 44 is “providing a mechanical or automated means...to replace a manual activity which has accomplished the same result...” because the Examiner has not shown or cited evidence that claim 44 recites a known “manual activity.” For this reason, citing *Venner* as a source of

supporting rationale is not an appropriate basis for an obviousness rejection in accordance with MPEP § 2144.04.

MPEP § 2144.04 also notes that it is not appropriate to rely solely on case law as the rationale to support an obviousness rejection, as Examiner has done in the present case, where the applicant has demonstrated the criticality of the specific limitation. As described in the specification at least at page 7, line 15—page 8, line 2, the aspect of the present invention that increases “the frequency at which the sensing unit measures the electrical operating characteristics of the luminaire...when the control unit determines that the luminaire is operating at less than a predetermined efficiency” demonstrates criticality insofar as it proactively and preemptively addresses a potential failing of a luminaire if there are warnings of such a failing. For this additional reason, citing legal precedent as a source of supporting rationale is not an appropriate basis for an obviousness rejection in accordance with MPEP § 2144.04.

(c) *THERE MUST BE A SUGGESTION OR MOTIVATION TO MODIFY THE REFERENCES*

MPEP § 2143.01 requires a motivation to modify the references, where the source of the motivation is the nature of the problem to be solved, the teachings of the prior art, or the knowledge of persons of ordinary skill in the art. Further, the MPEP stresses “the importance of relying on objective evidence and making specific factual findings with respect to the motivation to combine references.” *Id.* (emphasis added) In the present case, there is no “objective evidence” or “factual findings” to suggest or motivate the modification of the *Norman* reference to achieve the present claimed invention.

As shown above in the discussion of nonanalogous prior art, the *Norman* reference teaches various features that place it in a different field from applicant’s endeavor. At least the arrangement of the voltage regulator in the AE unit and the microprocessor and associated interfaces in the AE unit make the *Norman* reference distinct from the present claimed invention. For instance, these features of *Norman* are conflicting with the present invention’s claim elements that (1) provide for a monitoring system with compact and unburdensome sensors at each luminaire with separate sensing unit, control unit, and monitor; and (2) determine whether the desired levels of voltage and current are being provided at each luminaire. Because nothing in either in *Norman* or *Hardy* provides objective evidence or factual findings to modify *Norman* to incorporate these features of the claimed

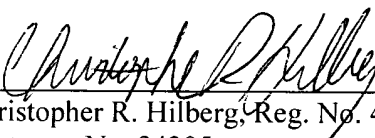
invention, the combination of *Norman* and *Hardy* is an improper basis for rejection of independent claims 1, 9, 21, and 35.

### CONCLUSION

Applicant submits that all pending claims are allowable and respectfully requests that a Notice of Allowance be issued in this case. In the event a telephone conversation would expedite the prosecution of this application, the Examiner may reach the undersigned at (612) 607-7386.

If any fees are due in connection with the filing of this paper, then the Commissioner is authorized to charge such fees including fees for any extension of time, to Deposit Account No. 50-1901 (Reference 17924-301).

Respectfully submitted,

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